

ABSTRACT

An object of the present invention is to provide a compound storage circuit that includes a storage circuit including a volatile storage circuit and a nonvolatile storage circuit connected in parallel to each other and that is arranged to be capable of an instant-on function by storing information equal to storage information stored in the volatile storage circuit into the nonvolatile storage circuit, the compound storage circuit being capable of reducing power consumption, and a semiconductor device including the compound storage circuit.

According to the present invention, in a compound storage circuit including a volatile storage circuit and a nonvolatile storage circuit connected in parallel to each other and a semiconductor device including the compound storage circuit, a determination circuit for comparing first storage information stored in the volatile storage circuit with second storage information that has already been stored in the nonvolatile storage circuit when storage information stored in the volatile storage circuit is written into the nonvolatile storage circuit is provided, and the first storage information is written into the nonvolatile storage circuit only when the first storage information is not equal to the second storage information.